

SCOTTISH METEOROLOGICAL SOCIETY.

OBSERVATIONS taken at Duthie Park, County of Aberdeen, During the MONTH of January 1910.

Lat. _____ Long. _____ Height of Cistern of the Barometer above Mean Sea Level 44 feet, above Ground 4 feet. Diameter of Rain Gauge 5 ins.
Height of Gauge above Mean Sea Level 40 feet. Height of Rim of Gauge above Ground 10 ins.

Date.	BAROMETER.				*SELF-REGISTERING THERMOMETERS.				HYGROMETER.				†RAIN.	WIND.				CLOUDS.				SUNSHINE. Hours.	THERMOMETERS under Ground.			WEATHER.		GENERAL REMARKS. Occurrence of Snow, Hail, Thunder, Lightning, Fog, Gales, Meteors, Auroras, Remarkable Depression or Elevation of Barometer, etc. Mention the hour at which Storms, including Thunder and Lightning, began and ended.	Date.	
	9 A.M.		9 P.M.		Screen.		Black Bulb Max. in Sun. 9 P.M.	Min. on Grass. 9 A.M.	9 A.M.		9 P.M.			9 A.M.		9 P.M.		Anemometer. 9 A.M.	9 A.M.		9 P.M.		9 A.M.			At 9 A.M.	At 9 P.M.			
	Barometer.	Attached Thermometer.	Barometer.	Attached Thermometer.	Max. 9 P.M.	Min. 9 P.M.			Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.		Direction.	Force. Scale of 0-12.	Direction.	Force. Scale of 0-12.		Species and Direction.	Amount (0-10).	Species and Direction.		Amount (0-10).	3 ins.	12 ins.					48 ins.
1	29.850	44			47.2	33.4			42	41.5			0.16	SW	6			CU	8								Some rain, then fair cool damp	1		
2	29.775	30			53.0	41.0			54	49.5			0.01	SW	6			CU	5								Fair very fine breezy	2		
3	30.000	30			56.6	37.9			47.7	46.4			0.00	SW	2			CU	5								Do, Do,	3		
4	30.250	31			54.0	36.0			39	37			0.00	SW	2			CU	5								Do, Do,	4		
5	30.300	36			55.0	35.4			44	42			0.00	S	2			CU	6										5	
6	30.400	45			46.0	30.0			29.4	28.			0.00	SW	2			O									White frost, fair fine	6		
7	30.600	45			31.0	29.0			33.6	33.0			0.01	S	2			O									Do, Do,	7		
8	29.800	44			47.0	33.0			45.0	43.8			0.00	SW	2			CU	8										8	
9	29.300	48			46.8	32.2			43.0	41.8			0.14	S	4			CU	10										9	
10	29.400	45			52.6	32.4			37.7	34.0			0.03	SW	4			CU	4										9	
11	29.404	44			57.0	32.0			36	33			0.00	SW	2			CU	4										10	
12	29.325	42			36.6	26.8			34.6	32.6			0.02	SW	2			CU	6										11	
13	29.750	42			38.0	26.4			31.5	29.0			0.15	W	2			O											12	
14	29.320	42			44.6	28.2			36.0	26.8			0.21	SW	2			CU	6										13	
15	29.580	41			43.0	33.0			34.0	32.0			0.21	SW	4			CU	6										14	
16	29.380	48			46.0	36.0			43.4	42.6			0.00	S	4			CU	10										15	
17	29.125	44			45.8	34.0			37.6	35.0			0.00	SW	6			CU	8										16	
18	29.075	42			38.0	30.8			33.0	30.3			0.00	W	4			CU	3										17	
19	28.900	41			38.0	28.0			32.5	30.4			0.00	SW	6			CU	6										18	
20	29.400	42			38.8	24.2			30.1	29.7			0.00	SW	8			CU	8										19	
21	29.700	40			32.5	27.8			30.2	29.0			0.16	W	2			CU	8										20	
22	29.950	39			32.5	30.2			30.0	29.5			0.12	W	2			CU	8										21	
23	29.800	38			32.4	21.0			31.0	30.0			0.16	W	2			CU	8										22	
24	28.900	40			37.0	22.0			37.0	36.0			0.24	W	4			CU	10										23	
25	29.310	40			37.0	19.0			27.0	27.0			0.19	W	2			CU	4										24	
26	29.200	33			24.0	10.0			11	10			0.09	SW	2			CU	2										25	
27	29.150	34			24.0	4.0			17	16			0.06	SW	2			O											26	
28	29.100	35			35.0	14.0			17	16			0.00	SW	2			CU	4										27	
29	29.125	35			35.0	23.0			34	33			0.08	W	4			CU	10										28	
30	29.625	36			36.6	28.0			29.0	28.			0.07	SW	2			CU	8										29	
31	29.550	36			40.8	29.0			38	37			0.04	W	2			CU	10										30	
Sums.	1478	10			166	135			45	146			8																	31
Means.	29.549	39.6			40.8	27.7			34.4	32.6			✓		3.0			5.7												
Instru- mental Errors.	-0.10				+1.0																									
Cor- rected Means.	29.529																													

WEATHER NOTATION.											
a.	denotes aurora.	m.	denotes mist.								
b.	blue sky, cloudless.	p.	passing showers.								
bc.	blue sky with detached clouds.	q.	squally.								
c.	sky mainly cloudy, but with openings between the clouds.	r.	continuous rain.								
d.	completely overcast.	s.	snow.								
e.	drizzling rain.	so. ha.	solar halo.								
f.	wet air, without rain falling.	t.	thunder.								
g.	fog.	t. s.	thunder-storm.								
h.	wet fog.	u.	ugly, threatening appearance.								
i.	gloomy.	v.	unusual visibility of distant objects.								
j.	hail.	w.	dew.								
k.	lightning.	x.	hoar frost.								
lu. co.	lunar corona.	z.	dust haze.								
lu. ha.	lunar halo.										

BEAUFORT SCALE FOR ESTIMATING FORCE OF WIND—(0-12).											
FORCE.		FORCE.		FORCE.							
0	Calm.	5	Fresh Breeze.	9	Strong Gale.						
1	Light Air.	6	Strong Breeze.	10	Whole Gale.						
2	Slight Breeze.	7	High Wind.	11	Storm.						
3	Gentle Breeze.	8	Gale.	12	Hurricane.						
4	Moderate Breeze.										

WEATHER NOTATION.			
a.	denotes aurora.	m.	denotes mist.
b.	" blue sky, cloudless.	p.	" passing showers.
bc.	" blue sky with detached clouds.	q.	" squally.
c.	" sky mainly cloudy, but with openings between the clouds.	r.	" continuous rain.
d.	" completely overcast.	so. ha.	" solar halo.
e.	" drizzling rain.	t.	" thunder.
f.	" wet air, without rain falling.	t. s.	" thunder-storm.
fe.	" fog.	u.	" ugly, threatening appear- ance.
g.	" wet fog.	v.	" unusual visibility of dis- tant objects.
h.	" gloomy.	w.	" dew.
i.	" hail.	x.	" hoar frost.
lu. co.	" lunar corona.	z.	" dust haze.
lu. ha.	" lunar halo.		

BEAUFORT SCALE FOR ESTIMATING FORCE OF WIND—(0-12).			
FORCE.		FORCE.	
0	Calm.	5	Fresh Breeze.
1	Light Air.	6	Strong Breeze.
2	Slight Breeze.	7	High Wind.
3	Gentle Breeze.	8	Gale.
4	Moderate Breeze.		

BAROMETER.

Corrected Mean at 9 A.M., minus Correction for Temp. 29.520
Corrected Mean at 9 P.M., minus Correction for Temp. 29.520
Mean at Station, corrected, and at 32°, 29.520
Correction for height, feet above Mean Sea Level, +44 feet 50
Mean, reduced to 32°, and Sea Level, 29.570
Highest Reading, corrected for Index error, on th. 29.570
Lowest Do. Do., on th. 29.570
Difference, or Monthly Range, 0.000

SELF-REGISTERING THERMOMETERS.

Highest in Month, on 3th, 56
Lowest in Month, on 8th, 4
Difference, or Monthly Range, 52
Mean of all the Highest, 40.8
Mean of all the Lowest, 28.7
Difference, or Mean Daily Range, 12.1
Mean Temperature of Month, $\frac{1}{2}$ (Mean Max. + Mean Min.), 34.8
Min. on Grass, Lowest in Month, 28.7
" " Mean, 34.8
Black Bulb, Max. in Sun, Highest in Month, 56

ADDITIONAL REMARKS.

HYGROMETER.

Dry Bulb, Mean of A.M. and P.M. Readings, 34.4
Wet Bulb, Mean of A.M. and P.M. Readings, 32.6
Computed Temperature of Dew-Point, 27.7
Do. Elastic Force of Vapour, 1.164
Do. Relative Humidity (Saturation = 100), 82
RAIN fell on 18 Days; Amount in Inches, 2.13 ✓

WIND.		SUMMARY.									
Direction.		N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force 0-12.
A.M.		1	1			4	18	4	3		
P.M.											
Sum.		2	2	0	0	8	36	8	6	0	3.0

* If Observations are taken at 9 A.M. only, the reading of the Maximum thermometer must be entered to the previous day.
† Rain to be measured at 9 A.M. and the amount entered to the previous day.

WEATHER

SUMMARY.

Number of Days of Precipitation, 18
Snow, 10
Hail, 0
Thunder, 0
Clear Sky, 4
Overcast, 5
Fog, 0
Ground Frost, 1
Gale, 2

INSTRUMENTS IN USE.

Barometer, No.
Dry Bulb, No.
Wet Bulb, No.
Maximum, No.
Minimum, No.
Solar Radiation, No.
Grass Min., No.
Sun Recorder, No.
1-foot Therm., No.
4-foot Therm., No.

Observations made and
Return verified by Peter Harper
(Signed)

SCOTTISH METEOROLOGICAL SOCIETY.

OBSERVATIONS taken at *Duthie Park Aberdeen*, County of *Aberdeen*, During the MONTH of *February* 1910.

Lat. _____ Long. _____ Height of Cistern of the Barometer above Mean Sea Level *44* feet, above Ground *4* feet. Diameter of Rain Gauge *5* ins.

Height of Gauge above Mean Sea Level *44* feet. Height of Rim of Gauge above Ground *10* ins.

Date.	BAROMETER.				* SELF-REGISTERING THERMOMETERS.				HYGROMETER.				+ RAIN.	WIND.				CLOUDS.				SUNSHINE. Hours.	THERMOMETERS under Ground.			WEATHER.		GENERAL REMARKS. Occurrence of Snow, Hail, Thunder, Lightning, Fog, Gales, Meteors, Auroras, Remarkable Depression or Elevation of Barometer, etc. Mention the hour at which Storms, including Thunder and Lightning, began and ended.	Date.		
	9 A.M.		9 P.M.		Screen.		Black Bulb Max. in Sun. 9 P.M.	Min. on Grass. 9 A.M.	9 A.M.		9 P.M.			9 A.M.		9 P.M.		Anemometer. 9 A.M.	9 A.M.		9 P.M.		9 A.M.			At 9 A.M.	At 9 P.M.				
	Barometer.	Attached Thermometer	Barometer.	Attached Thermometer	Max. 9 P.M.	Min. 9 P.M.			Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.		Direction.	Force. Scale of 0-12.	Direction.	Force. Scale of 0-12.		Species and Direction.	Amount (0-10).	Species and Direction.		Amount (0-10).	3 ins.	12 ins.					48 ins.	
																															inches.
1	29.575	41			39.0	34.8			38.0	37.8			0.00	SW	2	SW	2		ci	6										1	
2	29.250	44			40.0	37.0			39.0	38.5			0.06	SW	2				ci	10										2	
3	29.150	44			40.5	34.0			35.0	35.0			0.27	SE	2				n	10										3	
4	29.550	42			37.0	31.0			37.1	37.0			0.00	S	2				o	0										4	
5	29.452	41			37.0	28.8			39.6	38.8			0.12	S	2				n	10											5
6	29.500	45			48.0	38.5			39.0	38.0			0.00	SW	2				ci	6											6
7	29.350	43			48.0	33.6			33.5	33.4			0.00	SW	2				n	10											7
8	29.600	44			48.0	28.5			36.0	35.8			0.00	W	2				ci	6											8
9	30.155	41			38.0	24.6			37.0	36.8			0.00	SW	2				o	0											9
10	29.800	42			46.0	24.0			40.2	40.0			0.19	SW	4				n	10											10
11	29.650	43			41.5	34.5			34.6	34.4			0.00	SW	2				ci	4											11
12	29.690	46			47.0	28.0			42.6	40.6			0.00	SW	4				ci	8											12
13	29.545	45			48.0	35.7			36.6	36.4			0.04	SW	2				n	10											13
14	29.300	44			40.5	34.0			35.2	35.0			0.29	SW	2				ci	8											14
15	28.710	43			42.6	32.0			35.0	34.6			0.00	SW	2				ci	3											15
16	29.600	43			45.0	27.0			43.0	43.0			0.16	SW	2				n	10											16
17	28.642	42			44.6	31.8			41.2	41.1			0.12	SW	2				ci	6											17
18	28.672	43			47.0	37.0			42.2	42.1			0.23	S	4				n	10											18
19	29.050	44			47.0	33.0			42.5	42.0			0.02	SE	4				n	10											19
20	28.840	48			44.4	38.0			43.0	42.5			0.31	SW	6				ci	6											20
21	28.500	44			44.8	34.0			37.0	37.0			1.29	S	2				ci	5											21
22	29.560	46			44.1	31.0			37.0	36.0			0.00	SE	2				ci	5											22
23	29.625	44			44.5	31.0			38.0	37.0			0.37	SW	2				o	0											23
24	29.400	45			39.2	29.2			29.2	29.0			0.00	SE	4				n	10											24
25	29.325	42			41.8	31.0			30.3	30.0			0.04	SW	2				ci	4											25
26	29.235	42			42.0	26.2			29.5	28.6			0.00	W	2				ci	5											26
27	29.700	45			42.1	26.0			36.8	36.8			0.00	SW	2				ci	8											27
28	29.475	45			43.0	26.2			40.0	35.0			0.00	SE	4				n	10											28
29																															29
30																															30
31																															31
Sums.	1394	10			135	146			146	148			7						185												
Means.	29.335	43.6			43.7	31.4			37.5	37.0									6.6												
Instrumental Errors.																															
Corrected Means.																															

WEATHER NOTATION.

a. denotes aurora.

b. blue sky, cloudless.

bc. " blue sky with detached clouds.

c. " sky mainly cloudy, but with openings between the clouds.

d. " completely overcast.

o. " drizzling rain.

e. " wet air, without rain falling.

f. " fog.

fe. " wet fog.

g. " gloomy.

h. " hail.

l. " lightning.

lu. co. " lunar corona.

lu. ha. " lunar halo.

m. denotes mist.

n. " passing showers.

q. " squally.

r. " continuous rain.

s. " snow.

so. ha. " solar halo.

t. " thunder.

t. s. " thunder-storm.

u. " ugly, threatening appearance.

v. " unusual visibility of distant objects.

w. " dew.

x. " hoar frost.

z. " dust haze.

BEAUFORT SCALE FOR ESTIMATING FORCE OF WIND—(0-12).

FORCE.

0 Calm.

1 Light Air.

2 Slight Breeze.

3 Gentle Breeze.

4 Moderate Breeze.

5 Fresh Breeze.

6 Strong Breeze.

7 High Wind.

8 Gale.

9 Strong Gale.

10 Whole Gale.

11 Storm.

12 Hurricane.

WEATHER NOTATION.											
a. denotes aurora.	b. " blue sky, cloudless.	bc. " blue sky with detached clouds.	c. " sky mainly cloudy, but with openings between the clouds.	o. " completely overcast.	d. " drizzling rain.	e. " wet air, without rain falling.	f. " fog.	fe. " wet fog.	g. " gloomy.	h. " hail.	l. " lightning.
lu. co. " lunar corona.	lu. ha. " lunar halo.	m. denotes mist.	p. " passing showers.	q. " squally.	r. " continuous rain.	s. " snow.	so. ha. " solar halo.	t. " thunder.	ts. " thunder-storm.	u. " ugly, threatening appearance.	v. " unusual visibility of distant objects.
w. " dew.	x. " hoar frost.	z. " dust haze.									

BEAUFORT SCALE FOR ESTIMATING FORCE OF WIND—(0-12).											
0 Calm.	1 Light Air.	2 Slight Breeze.	3 Gentle Breeze.	4 Moderate Breeze.	5 Fresh Breeze.	6 Strong Breeze.	7 High Wind.	8 Gale.	9 Strong Gale.	10 Whole Gale.	11 Storm.
											12 Hurricane.

BAROMETER.

Corrected Mean at 9 A.M., minus Correction for Temp. *29.296*

Corrected Mean at 9 P.M., minus Correction for Temp. *29.296*

Mean at Station, corrected, and at 32°, *29.296*

Correction for height, feet above Mean Sea Level, ... + *50*

Mean, reduced to 32°, and Sea Level, *29.346*

Highest Reading, corrected for Index error, on th,

Lowest Do. Do., on th,

Difference, or Monthly Range,

SELF-REGISTERING THERMOMETERS.

Highest in Month, on 5 th, *50*

Lowest in Month, on 10 th, *24*

Difference, or Monthly Range, *26*

Mean of all the Highest, *43.7*

Mean of all the Lowest, *32.4*

Difference, or Mean Daily Range, *11.3*

Mean Temperature of Month, $\frac{1}{2}$ (Mean Max. + Mean Min.), ... *38.1*

Min. on Grass, Lowest in Month,

" " Mean,

Black Bulb, Max. in Sun, Highest in Month,

ADDITIONAL REMARKS.

HYGROMETER.

Dry Bulb, Mean of A.M. and P.M. Readings, *37.5*

Wet Bulb, Mean of A.M. and P.M. Readings,

Computed Temperature of Dew-Point,

Do. Elastic Force of Vapour,

Do. Relative Humidity (Saturation = 100), ...

RAIN fell on *15* Days; Amount in Inches, *3.51*

WIND. SUMMARY.											
Direction.	N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force 0-12.	
A.M.	1			5	4	16	1	1			
P.M.											
Sum.	2	0	0	10	8	32	2	2	0	2.6	

* If Observations are taken at 9 A.M. only, the reading of the Maximum thermometer must be entered to the previous day.

† Rain to be measured at 9 A.M. and the amount entered to the previous day.

WEATHER

SUMMARY.

Number of Days of Precipitation, ... *14*

Snow, *3*

Hail, *0*

Thunder, *0*

Clear Sky, *3*

Overcast, *11*

Fog, *0*

Ground Frost, *0*

Gale, *0*

INSTRUMENTS IN USE.

Barometer, No.

Dry Bulb, No.

Wet Bulb, No.

Maximum, No.

Minimum, No.

Solar Radiation, No.

Grass Min., No.

Sun Recorder, No.

1-foot Therm., No.

4-foot Therm., No.

Observations made and Return verified by { *Peter Harper*
Duthie Park

(Signed)

THE SECRETARY

SCOTTISH METEOROLOGICAL SOCIETY

122 GEORGE STREET

EDINBURGH

BOOK POST



1891	1892	1893	1894
1895	1896	1897	1898
1899	1900	1901	1902
1903	1904	1905	1906
1907	1908	1909	1910
1911	1912	1913	1914
1915	1916	1917	1918
1919	1920	1921	1922
1923	1924	1925	1926
1927	1928	1929	1930
1931	1932	1933	1934
1935	1936	1937	1938
1939	1940	1941	1942
1943	1944	1945	1946
1947	1948	1949	1950
1951	1952	1953	1954
1955	1956	1957	1958
1959	1960	1961	1962
1963	1964	1965	1966
1967	1968	1969	1970
1971	1972	1973	1974
1975	1976	1977	1978
1979	1980	1981	1982
1983	1984	1985	1986
1987	1988	1989	1990
1991	1992	1993	1994
1995	1996	1997	1998
1999	2000	2001	2002

SCOTTISH METEOROLOGICAL SOCIETY

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OBSERVATIONS taken at Dunthill Park, County of Aberdeen, During the MONTH of March 1910.

Lat. _____ Long. _____ Height of Cistern of the Barometer above Mean Sea Level 44 feet, above Ground 4 feet. Diameter of Rain Gauge 5 ins.
Height of Gauge above Mean Sea Level 40 feet. Height of Rim of Gauge above Ground 12 ins.

Date.	BAROMETER.				* SELF-REGISTERING THERMOMETERS.				HYGROMETER.				+RAIN.	WIND.				CLOUDS.				SUNSHINE. Hours.	THERMOMETERS under Ground.			WEATHER.		GENERAL REMARKS. Occurrence of Snow, Hail, Thunder, Lightning, Fog, Gales, Meteors, Auroras, Remarkable Depression or Elevation of Barometer, etc. Mention the hour at which Storms, including Thunder and Lightning, began and ended.	Date.		
	9 A.M.		9 P.M.		Screen.		Black Bulb Max. in Sun. 9 P.M.	Min. on Grass. 9 A.M.	9 A.M.		9 P.M.			9 A.M.		9 P.M.		9 A.M.		9 P.M.			9 A.M.			At 9 A.M.	At 9 P.M.				
	Barometer.	Attached Ther. meter.	Barometer.	Attached Ther. meter.	Max. 9 P.M.	Min. 9 P.M.			Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.		Amount at 9 A.M.	Direction.	Force, Scale of 0-12.	Direction.	Force, Scale of 0-12.	Ane. monometer. 9 A.M.	Species and Direction.	Amount (0-10).		Species and Direction.	Amount (0-10).	3 ins.					12 ins.	48 ins.
1	29.825	43			43.0	26.0			32.0	32.0			0.20	SW	3			0.00									White frost. A fair & fine	1			
2	29.576	46			43.2	34.2			43.4	43.2			0.20	SE	6			10.0									dull. been high wind & rain	2			
3	30.025	45			48.4	36.6			41.0	37.6			0.02	S	6			8.0									dull been rain	3			
4	30.025	47			48.0	37.6			41.0	37.0			0.00	S	4			10.0									dull fair & fresh	4			
5	30.000	46			41.6	38.4			41.0	38.8			0.00	SE	4			10.0									Do	5			
6	30.000	49			41.8	38.4			41.4	40.0			0.00	S	2			8.0									heavy dull clouds fair	6			
7	29.900	49			46.0	38.4			42.0	41.0			0.00	S	2			10.0									Do	7			
8	29.800	47			50.0	38.0			43.0	42.0			0.14	SW	4			5.0									been heavy showers	8			
9	29.500	48			50.0	38.0			43.0	41.0			0.14	SW	2			2.0									fair & mild	9			
10	29.150	47			50.6	40.0			44.5	39.8			0.24	SW	4			4.0									showers began at night	10			
11	29.800	48			49.0	39.0			42.2	38.2			0.32	SW	6			6.0									unsettled some rain	11			
12	30.100	47			48.0	34.0			42.0	37.2			0.08	SW	2			4.0									dull fair & fine	12			
13	30.000	44			44.0	30.0			39.0	30.6			0.00	SW	3			5.0									fair & fine mild	13			
14	29.875	45			44.0	30.0			38.8	37.0			0.00	SW	2			10.0									com on rain & am	14			
15	30.025	55			44.0	29.2			32.0	27.4			0.00	SW	2			4.0									fair mild & fine	15			
16	29.602	46			50.0	34.5			45.0	43.0			0.16	SW	2			4.0									Do	16			
17	29.640	47			57.2	39.5			46.8	43.0			0.05	SW	6			4.0									Wet stormy showers	17			
18	29.825	41			55.0	26.1			45.0	32.0			0.08	SW	4			10.0									3. inches of snow lying showers	18			
19	30.000	45			41.6	28.4			38.0	36.0			0.80	SW	2			10.0									fair dull mild	19			
20	30.000	52			49.8	37.0			47.0	46.0			0.00	SW	1			8.0									Do	20			
21	30.053	29			57.8	37.0			45.8	40.0			0.00	SW	6			2.0									fair & fine breezy	21			
22	30.400	29			58.8	34.0			42.0	39.0			0.00	SW	2			8.0									fair & fine	22			
23	30.450	29			58.8	34.0			46.0	42.0			0.00	SW	2			10.0									Do	23			
24	30.400	30			58.0	34.0			50.2	44.8			0.00	SW	2			0.0									Do	24			
25	30.450	31			58.8	41.0			45.0	43.6			0.00	SW	2			9.0									Do	25			
26	30.500	47			58.5	40.3			45.6	43.6			0.00	SW	2			8.0									Do	26			
27	30.050	29			58.0	38.5			46.0	40.0			0.00	S	5			8.0									Do	27			
28	30.310	49			49.0	32.0			46.6	41.4			0.00	SW	2			0.0									Do	28			
29	30.480	45			55.0	38.0			45.1	44.2			0.00	SW	2			4.0									Do	29			
30	30.500	41			61.0	30.0			44.0	43.0			0.00	SE	2			4.0									Do	30			
31	30.620	44			61.0	35.0			42.0	41.6			0.00	S	2			0.0									Do	31			
Sums.	1164	18			147	165			125	116			2.50		94			185													
Means.	30.024	42.6			49.6	35.2			42.5	39.6			1.93		30			6.0													
Instrumental Errors.																															
Corrected Means.																															

WEATHER NOTATION.																																																								
a.	denotes	sun.	b.	blue sky, cloudless.	c.	blue sky with detached clouds.	d.	sky mainly cloudy, but with openings between the clouds.	e.	completely overcast.	f.	drizzling rain.	g.	wet air, without rain falling.	h.	fog.	i.	wet fog.	j.	gloomy.	k.	hail.	l.	lightning.	m.	lunar corona.	n.	lunar halo.	o.	denotes	p.	passing showers.	q.	squally.	r.	continuous rain.	s.	snow.	so.	so. ha.	t.	solar halo.	u.	thunder.	v.	thunder-storm.	w.	ugly, threatening appearance.	x.	unusual visibility of distant objects.	y.	dew.	z.	hoar frost.	aa.	dust haze.

BEAUFORT SCALE FOR ESTIMATING FORCE OF WIND—(0-12).													
FORCE.	0	1	2	3	4	5	6	7	8	9	10	11	12
	Calm.	Light Air.	Slight Breeze.	Gentle Breeze.	Moderate Breeze.	Fresh Breeze.	Strong Breeze.	High Wind.	Gale.	Strong Gale.	Whole Gale.	Storm.	Hurricane.

BAROMETER.

Corrected Mean at 9 A.M., minus Correction for Temp. 38 29.986
Corrected Mean at 9 P.M., minus Correction for Temp. 38 29.986
Mean at Station, corrected, and at 32°, 29.986
Correction for height, feet above Mean Sea Level, 50
Mean, reduced to 32°, and Sea Level, 30.036
Highest Reading, corrected for Index error, on th, 30.036
Lowest Do. Do. on th, 29.576
Difference, or Monthly Range, 0.460

SELF-REGISTERING THERMOMETERS.

Highest in Month, on 30th, 61
Lowest in Month, on 18th, 26
Difference, or Monthly Range, 35
Mean of all the Highest, 49.6
Mean of all the Lowest, 36.2
Difference, or Mean Daily Range, 13.4
Mean Temperature of Month, $\frac{1}{2}$ (Mean Max. + Mean Min.), 42.9
Min. on Grass, Lowest in Month, 26.1
" " Mean, 35.2
Black Bulb, Max. in Sun, Highest in Month, 58.8

ADDITIONAL REMARKS.

HYGROMETER.

Dry Bulb, Mean of A.M. and P.M. Readings, 42.5
Wet Bulb, Mean of A.M. and P.M. Readings, 39.6
Computed Temperature of Dew-Point, 21.3
Do. Elastic Force of Vapour, 2.13
Do. Relative Humidity (Saturation = 100), 78
RAIN fell on 12 Days; Amount in Inches, 2.53
1.93

WIND.		SUMMARY.									
Direction.		N	NE	E	SE	S	SW	W	NW	Calms or Variable.	Mean Force 0-12.
A.M.					3	6	6	6	10		
P.M.											
Sum.		0	0	0	6	12	12	12	20	0	3.0

* If Observations are taken at 9 A.M. only, the reading of the Maximum thermometer must be entered to the previous day.
† Rain to be measured at 9 A.M. and the amount entered to the previous day.

WEATHER

SUMMARY.

Number of Days of Precipitation, 12
Snow, 2
Hail, 0
Thunder, 0
Clear Sky, 4
Overcast, 9
Fog, 0
Ground Frost, 0
Gale, 0

INSTRUMENTS IN USE.

Barometer, No. _____
Dry Bulb, No. _____
Wet Bulb, No. _____
Maximum, No. _____
Minimum, No. _____
Solar Radiation, No. _____
Grass Min., No. _____
Sun Recorder, No. _____
1-foot Therm., No. _____
4-foot Therm., No. _____

Observations made and Return verified by Peter Harper

(Signed) Peter Harper

122 GEORGE STREET

EDINBURGH

BOOK POST



SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Duffin Park Aberdeen, County of Aberdeen, During the MONTH of April 1910.

Lat. _____, Long. _____, Distance from Sea 2 miles. Height of Cistern of the Barometer above Mean Sea-Level 44 feet, above Ground 4 feet.

Diameter of Rain Gauge 5 inches. Height of Rim of Gauge above Ground 12 inches

The Hours of Observation are of Greenwich Time.

Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER.				RAIN.	WIND.				CLOUDS.				SUNSHINE. Hours.	THERMOMETERS under Ground.					GENERAL REMARKS. Occurrence of Snow, Hail, Thunder, Lightning, Fog, Gales, Meteors, Auroras, Remarkable Depression or Elevation of Barometer, etc. <i>Mention the hour at which Storms, including Thunder and Lightning, began and ended.</i>	Days of Month.			
	9 A.M.		9 P.M.		Protected in Screen, 4 feet above Ground.		Black Bulb Max. in Sun. No.	Min. on Grass. No.	9 A.M.		9 P.M.			Amount at 9 A.M.	9 A.M.		9 P.M.		Ang. monometer. 9 A.M.	9 A.M.			9 P.M.		9 A.M.							
	Barometer. No.	Attached Thermometer.	Barometer. No.	Attached Thermometer.	Max. No.	Min. No.			Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.			Direction.	Force. Scale of 0-12.	Direction.	Force. Scale of 0-12.		Species and Direction.	Amount (0-10).		Species and Direction.	Amount (0-10).	No. 3 ins.	No. 12 ins.	No. 22 ins.			No. 36 ins.	No. 48 ins.	
																																inches.
1	30.200	20.	30.200	20.	60.9	43							0.00	S	2			ci	0							air clear & cool	1					
2	30.020	25	30.020	25	53.8	33.0							0.00		0			ci	8							mild fine bright sun	2					
3	29.830	49	29.830	49	48.3	35.6							0.00	S	1											mild fair & fine	3					
4	29.900	31	29.900	31	51.0	35.6							0.00	SE	4											strong N.E. wind cool	4					
5	29.845	29	29.845	29	48.6	37.0							0.00	SE	4											do do do	5					
6	30.100	30	30.100	30	46.4	41.0							0.17	E	2											mild & fair	6					
7	30.200	30	30.200	30	50.5	38.0							0.00	NW	1											do do do	7					
8	30.175	30	30.175	30	45.2	39.0							0.00	SW	1											white frost clear	8					
9	30.000	28	30.000	28	49.0	36.2							0.02	N	1											mild fair & fine	9					
10	29.900	30	29.900	30	49.0	33.0							0.00	S	1			ci	6							do do do	10					
11	29.575	30	29.575	30	57.0	38.0							0.00	SW	2			ci	8							dull fair	11					
12	29.250	30	29.250	30	54.0	38.0							0.15	N	2			ci	6							fair & fine	12					
13	29.245	30	29.245	30	52.0	38.0							0.28	SE	2			ci	10							heavy rain all night am	13					
14	29.015	28	29.015	28	43.0	37.6							0.00	W	1			ci	10							fair & fine cool dull	14					
15	29.310	29	29.310	29	47.0	30.0							0.00	NW				ci	10							came on rain 9 a.m.	15					
16	29.575	46	29.575	46	43.0	33.0							0.44	NE	2			ci	8							some rain P.M.	16					
17	29.745	30	29.745	30	42.0	36.0							0.32	E	2			n	10							been rain all night am	17					
18	29.750	28	29.750	28	42.2	32.5							0.02	S	8			n	10							high south wind like rain	18					
19	29.700	28	29.700	28	37.0	36.8							0.00	S	1			n	1							fair mild & fine	19					
20	30.150	27	30.150	27	33.0	40.0							0.02	NW	2											do. do. do.	20					
21	29.850	30	29.850	30	37.0	40.0							0.04	NW	2			ci	1							do. do. do.	21					
22	30.050	27	30.050	27	37.5	33.0							0.00	NW	2											do. do. do.	22					
23	29.440	48	29.440	48	46.5	33.0							0.10	S	4			ci	5							Breezy Cold south wind	23					
24	28.950	48	28.950	48	35.5	33.0							0.02	NW	2			ci	6							fair drying wind cool	24					
25	29.150	49	29.150	49	33.4	36.4							0.00	NW	4			n	10							do. do. do.	25					
26	29.250	48	29.250	48	43.0	31.0							0.00	NW	2			ci	4							do. do. do.	26					
27	29.775	47	29.775	47	46.2	33.0							0.00	NW	2			ci	6							white frost fair & clear	27					
28	29.600	47	29.600	47	53.0	36.0							0.26	NW	6			ci	2							cold some rain	28					
29	29.500	47	29.500	47	54.0	36.0							0.02	NW	2											cold breezy fair & dry	29					
30	29.850	30	29.850	30	55.8	30.0							0.03	NW	2											fair dull	30					
31																																
Sums.	3104	13	3104	13									4		67																	
Means.	29.683	24.3	29.683	24.3									2.79		2.2																	
Corrections for Instrumental Errors.																																
Corrections for Diurnal Range.																																
Corrected Means																																

BAROMETER. Corrected Mean at 9 A.M., minus Correction for Temp. = 29.668
 Corrected Mean at 9 P.M., minus Correction for Temp. = 29.668
 Mean at Station, corrected, and at 32°, = 29.668
 Correction for height, feet above Mean Sea-Level, = + 50
 Mean, reduced to 32°, and Sea-level, = 29.718
 Highest Reading, corrected for Index error, on the th, =
 Lowest Do. Do., on the th, =
 Difference, or Monthly Range, =

S.-R. THERMOMETER, (in shade) Highest in Month, corrected for Index Errors, on the 30 th, = 59.9
 Lowest in Month, corrected for Index errors, on the 8 th, = 29.1
 Difference, or Monthly Range, =
 Mean of all the Highest, = 49.9
 Mean of all the Lowest, = 36.4
 Difference, or Mean Daily Range, = 13.5
 Mean Temperature of Month, $\frac{1}{2}$ (Mean Max. + Mean Min.), = 43.2
 S.-R. THERMOMETER, Min. on Grass, Lowest in Month, =
 " " Mean, =
 Black Bulb, Max. in Sun, Highest in Month, =

HYGROMETER, Dry Bulb, Mean of A.M. and P.M. Readings, =
 Wet Bulb, Mean of A.M. and P.M. Readings, =
 Computed Temperature of Dew-Point, =
 Do. Elastic Force of Vapour, =
 Do. Relative Humidity (Saturation = 100), =
 Rain fell on 13 Days; Amount in Inches, = 2.79

WIND.		SUMMARY.									
Direction.		N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force 0-12.
A.M.		2	12	3	6	4	1	10	1		
P.M.											
Sum.		4	2	4	6	12	8	2	20	2	2.2

Observations made and Return verified by Peter Harper
 (Signed) Peter Harper

N.B.—Rain to be measured at 9 A.M. and the amount entered to the previous day.
 See instructions on back of Schedule.

INSTRUCTIONS

FOR TAKING

METEOROLOGICAL

OBSERVATIONS.

In order to insure uniformity in the observations made at the Observing Stations of the Scottish Meteorological Society, the Council request the Observers to adopt the methods described below.

HOURS OF OBSERVATION.

The Council recommend that Observations be made precisely at 9 A.M. and 9 P.M. (Greenwich Time). At both hours the Barometer and Dry and Wet Bulb Thermometers should be read, and notes made of the Wind, Cloud, and general weather. The Rain Gauge should be read at 9 A.M. only, and the Maximum and Minimum Self-registering Thermometers at 9 P.M. only.

It is hoped that every effort will be made to insure punctuality. When, however, an observation is taken not at the usual hours, it is requested that this be stated in a note on the Schedule.

All instruments used should be compared with a certified standard; Observers are requested to communicate with the Secretary before purchasing new or repairing old instruments.

BAROMETER.

The Barometer should be hung in a good light and in a room not exposed to sudden changes of temperature. The upper part of the scale must not be higher than the level of the observer's eye, and the instrument must hang vertically. Barometers should not be moved from their places except by persons accustomed to the work, as they are very liable to get air into the mercury column when improperly handled. Mercurial barometers mounted in metal cases are the only sort suitable for the accurate measurement of atmospheric pressure.

FOOTING BAROMETER.—In setting this instrument the level of the mercury in the glass cistern has first to be adjusted by turning the screw below the cistern till the surface of the mercury just touches the ivory point which projects downwards from the cover of the cistern. A modification of the Fortin pattern is used at several of the Society's Stations, in which the adjustment is made by turning the screw until the zero line on an ivory rod which projects through the cover of the cistern is brought to coincide with the lines on the uprights beside it. In either pattern this cistern adjustment must be made before the Vernier at the top of the mercury column is set.

In the **BOARD OF TRADE** pattern of barometer no adjustment of the cistern is required, and the Observer can at once proceed to set the Vernier, which in all three classes of instrument is done as follows:—

First see that the Vernier is raised above the mercury, then lower it till its front and back edge both just touch, that is, form a tangent to, the highest part of the mercury column. The top of the mercury is usually slightly convex, and care must be taken not to bring the Vernier down to where the front of the mercury touches the glass, which is below the real top of the column.

The attached thermometer should be read and noted before setting the barometer, as its readings may be affected by heat from the Observer's body while handling the instrument.

The errors most frequently made in reading the barometer are mistakes of 1/1000 inch, 0.100 inch, and 0.050 inch; that is to say, instead of 29.365 one of the following is sometimes set down—viz. 30.365, 29.265, or 29.315. Experience having shown that even the best Observers occasionally make these mistakes, the reading, after it is written down, should be compared again with the scale.

DATES IN CONNECTION WITH THE PERIODICAL RETURN OF THE SEASONS.

FOREST TREES.	In Flower.	Leaf Buds first Appear.	In Leaf.	Divested of Leaves.	CROPS, mentioning variety.	Sowing or Planting.	Appearing above Ground.	In Ear or Flower.	First Cut or Raised.
Alder,					Barley,				
Ash,					Bere or Bigg,				
Beech,					Oats,				
Birch,					Wheat,				
Elm,					Beans,				
Larch,					Pease,				
Lime,					Potatoes,				
Oak,					Turnips,				
Sycamore or Plane,					Eye Grass,				

SHRUBS, ETC.	First in Blossom.	FRUITS.	First in Blossom, generally.	MIGRATORY BIRDS.	First Arrival.	Departure.
Barberry,		Apple,		Cuckoo,		
Bourtree or Elder,		Black Currant,		Curlew,		
Broom,		Cherry,		House-Sparrow,		
Hazel,		Gean,		Lapwing,		
Hawthorn,		Gooseberry,		Plover,		
Holly,		Peach,		Sand-Martin,		
Laburnum,		Pear,		Starling,		
Lilac,		Plum,		Swan,		
Mezerion,		Strawberry,		Rail or Corn Crike,		
Mountain Ash or Rowan,						
Red Flowering Currant,						
Rhododendron Ponticum,						
Whin,						

The Society will be glad to receive any portions of the information indicated in this table that may come under the Observer's notice.

RAIN GAUGE.

The Rain Gauge should be read at 9 A.M. each day, and the amount entered to the previous day on the Schedule: thus the quantity measured at 9 A.M. on the 5th should be put down on the line containing the observations of the 4th of the month, since out of the twenty-four hours ending at 9 A.M. on 5th fifteen belong to the 4th and only nine to the 5th, so that the amount may more properly be credited to the former day. The monthly total for, say, January is thus what falls between 9 A.M. on 1st January and 9 A.M. on 1st February.

The measuring glass is divided to hundredths of an inch—the highest line indicating .50, that is fifty hundredths or half an inch. The amount should be entered on the Schedule thus: if up to say the sixth line in the glass as .06, if up to the twenty-third line as .23, if up to the thirtieth line as .30, and so on, there being always two figures put down to the right of the decimal point. Care should be taken to avoid entering .08 as simply 8, or .30 as 3, as this may cause confusion when adding the figures to get the total for the month.

When the fall exceeds one fill of the measuring glass it is necessary to measure it in portions, and each successive reading should be jotted down on the flyleaf of the notebook or other convenient place before the glass is emptied. Thus after heavy rain the amounts measured might be:—

.47
.42
.35
1.27

The total, 1.27, would be entered on the Schedule.

The glass must be held vertically or placed on a level surface when reading. A little uncertainty is sometimes caused by the upward curvature of the water where it touches the side of the glass, but the true reading is half way between the two apparent edges of the water surface. When there is nothing in the gauge a stroke (—) should be entered on the Schedule rather than the figure 0.

Snow or Hail is counted as Rainfall, and should be melted and measured as such. The upper part of the gauge may be taken indoors, and what is lying in it thawed. To save time, especially if snow or rain be then falling, it is convenient to add a measured quantity of warm water to the snow in the gauge, this quantity being afterwards deducted from the total to get the amount that has fallen. The depth of snow lying on the ground should be noted in the Remarks column.

In gauges, such as Flemings, in which a float and measuring rod is used, the rod should be removed or tied down below the level of the rim, except when a measurement is being taken, because if allowed to project above the gauge, it would prevent it catching the true amount of fall.

If a gauge is only read once a month this should be done on the morning of the 1st, and the amount entered to the previous month.

The Rain Gauge should be placed in an open situation, if possible with no elevated objects close to it, in any case trees, walls, etc., should never be nearer to the gauge in horizontal distance than their own height. The gauge should be firmly fixed with its rim 12 inches above ground; if surrounded by grass, care must be taken that it is never allowed to grow as high as the rim. The gauges at most Stations are five inches in diameter, though a few of larger or smaller size are also in use. A convenient way of fixing a gauge in position is to drive four stout wooden pegs from 12 to 18 inches long into the ground, one at each side of the gauge.

ADDITIONAL REMARKS.

WIND, CLOUD, SUNSHINE, ETC.

WIND.

The direction and force of the Wind should be noted at 9 A.M. and 9 P.M. In confined situations where the true direction cannot be easily observed, it is best to ascertain this by watching the movement of smoke from chimneys, or even of the lower clouds. The force of the wind should be noted according to the scale given on the other side of the Schedule.

At Stations where an Anemometer is in use, the readings at 9 A.M. each day should be put down in the column provided, the values being entered to the previous day, as in the case of the Rainfall.

CLOUDS.

The amount of Cloud should be estimated on the scale, 0 to 10, 0 indicating a clear and 10 an overcast sky. Only the part of the sky over 30° above the horizon should be taken into account, as it is impossible to estimate the space covered by Clouds nearer the horizon. A convenient table for noting briefly the species of Cloud will be found on the other side of the Schedule. It is desirable to note, if possible, the direction from which the Clouds are moving. If there is more than one layer of clouds on the sky, they should be noted.

Thus, for example, Cir. W. 4 would indicate that four-tenths of the sky was covered with cirrus moving from the West, and two-tenths with cumulus moving from the S.W.

SUNSHINE.

This column is primarily for those Stations where a Sunshine Recorder is kept; at other Stations, however, the Observer may note in it the number of hours each day that the sun shines with sufficient clearness to cast a distinct shadow.

RADIATION THERMOMETERS.

A MAXIMUM THERMOMETER, with its bulb blackened and enclosed in an outer glass bulb exhausted of air, is used at many stations to register the highest temperature in the sun. It should be mounted horizontally about four feet above ground with its bulb pointing south, and should be read and set at 9 P.M.

A MINIMUM THERMOMETER on grass is used to register the lowest radiation temperature at night. It should be placed on wooden supports a few inches above the surface of the grass. It may be read and set at 9 P.M., but in warm weather, as the spirit in this instrument is liable to evaporate when exposed to bright sunshine and to condense again in the upper part of the tube, it is better to read it at 9 A.M., to put it inside the screen during the day, and to set and replace it at 9 P.M.

THERMOMETERS UNDER GROUND.

These should be read at 9 A.M., and the readings entered on the day on which they are made.

REMARKS.

In the Remarks column should be noted all occurrences of Snow, Hail, or Heavy Rain; of Thunder, or Lightning, or both together; of all Auroras, Meteors, or Halos round the sun or moon; of Fogs, Gales or Storms, and generally of all noteworthy Weather phenomena.

The table and additional lines on the back of the Schedule are for the use of those Observers who wish to record Notes connected with the changes of the Seasons, such as the growth of Crops, Fruit, etc., and the migrations of Birds; also the prevalence of Diseases in man, in the lower animals, and in plants. Such observations are often of great interest and utility when taken in conjunction with the ordinary Meteorological records.

THE SECRETARY,

Scottish Meteorological Society,

122 George Street,

EDINBURGH.

Halfpenny

Stamp.



SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Dutton Park, Henderson County of Aberdeen, During the MONTH of May 1910.
 Lat. _____, Long. _____, Distance from Sea 2 miles. Height of Cistern of the Barometer above Mean Sea-Level 44 feet, above Ground 174 feet.
 Diameter of Rain Gauge 5 inches. Height of Rim of Gauge above Ground 12 inches
cf. M.O.
 The Hours of Observation are of Greenwich Time.

Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER.				RAIN.		WIND.				CLOUDS.				THERMOMETERS under Ground.						GENERAL REMARKS.	Days of Month.	
	9 A.M.		9 P.M.		Protected in Screen, 4 feet above Ground.		Black Bottle Max.	Min. on Grass.	9 A.M.		9 P.M.		Amount at 9 A.M.	9 A.M.		9 P.M.		Anemometer. 9 A.M.	9 A.M.		9 P.M.		Sunshine. Hours.	9 A.M.					Occurrence of Snow, Hail, Thunder, Lightning, Fog, Gales, Meteors, Auroras, Remarkable Depression or Elevation of Barometer, etc. Mention the hour at which Storms, including Thunder and Lightning, began and ended.		
	Barometer. No.	Attached Thermometer	Barometer. No.	Attached Thermometer	Max. No.	Min. No.			Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.		Direction.	Force. Scale of 0-12.	Direction.	Force. Scale of 0-12.		Species and Direction.	Amount (0-10).	Species and Direction.	Amount (0-10).		No. 3 ins.	No. 12 ins.	No. 22 ins.	No. 36 ins.	No. 48 ins.			
							inches.	°					inches.					°					inches.								°
	1	30.250	55			62	42	67.			.04	0.00	SW	2					B	8	ci							Fair mild & very cold			1
	2	67.000	57			64.0	34.0	54			-	0.04	CPW	6					6	ci								Fair			2
3	29.840	57			29.8	34.0	48			.04	0.00	CP	6					6	ci								Fair & fine	3			
4	29.900	56			48.0	44.0	50			-	0.04	CP	6					6	ci								some rain fair P. M.	4			
5	29.900	50			50.5	51.0	50			.47	0.00	SW	4					4	ci										5		
6	29.060	49			50.2	32.0	54			-	0.47	SW	6					5	ci										6		
7	29.150	49			58.7	34.0	52			.03	0.00	CPW	8					8	ci										7		
8	29.000	50			52.0	35.0	44			.30	0.03	NW																	8		
9	29.800	48			44.0	44.0	51			-	0.30	N	2					8	ci										9		
10	29.600	47					54			.03	0.00	NW	1					4	ci										10		
11	29.850	48					53			-	0.03	CP						2											11		
12	30.000	52					50			.45	0.45	CP						2											12		
13	30.000	51					50			-	0.00	CP						5	ci										13		
14	31.045	51			60.2	56.6	60			-	0.00	CP	2					2											14		
15	29.975	71					60			.45	0.10	CP	3																15		
16	29.975	60			60.2	57.2	60			.40	0.40	CP	0					0											16		
17	29.960						50			.40	0.12	N																	17		
18	29.900						51			.40	0.00	SW	2					2											18		
19	29.900	55			50.8	35.0	49			.12	0.00	SW						2										been heavy rain now dull	19		
20	29.955	58			49.0	48.0	60			-	0.00	SE						3	ci									fair fog AM. fine & clear PM	20		
21	29.460	53			50.0	48.0	57			-	0.00	W	2					10	n									fair & fine all day	21		
22	30.200	58			60.3	56.2	61			-	0.00	CP	2					0										Do. Do. Do.	22		
23	30.275	58			58.0	54.0	58			-	0.00	E	1					6	ci									Do. Do. Do.	23		
24	30.400	57			50.0	46.5	55			-	0.00	E	2					10	n									fair dull	24		
25	30.400	53			53.0	50.5	55			-	0.34	CP	2					0											fair & very fine mild	25	
26	30.150	61			53.0	50.5	68			.34	0.00	CP	2					8	ci										fair dry breezy	26	
27	30.055	56			68.0	57.5	58			.34	0.00	NW						10	n										fair dry dull	27	
28	29.755	60			58.8	54.0	63			-	0.00	N	2					8	ci										fair mild & fine	28	
29	29.625	66			53.0	48.0	58			.04	0.04	S	4					8	ci										fair breezy	29	
30	29.200	56			58.6	48.0	59			-	0.00	SW	6					8	ci										fair & fine rain latter	30	
31	29.500	56			59.0	48.0	60			.04		N																			31
Sums.					10 169								4 245																		
Means.					55.5				43.1				✓																		
Corrections for Instrumental Errors.																															
Corrections for Diurnal Range.																															
Corrected Means																															

BAROMETER. Corrected Mean at 9 A.M., *minus* Correction for }
Temp. = }

Corrected Mean at 9 P.M., *minus* Correction for }
Temp. = }

Mean at Station, corrected, and at 32°, = 29.824

Correction for height, feet above Mean Sea-level, = + 49

Mean, reduced to 32°, and Sea-level, M.O. = 29.873

Highest Reading, corrected for Index error, on the ✓ th, =

Lowest Do. Do., on the th, =

Difference, or **Monthly Range**, =

S-R. THERMOMETER, (in shade) Highest in Month, corrected for Index Errors, on the 26th, = 68.

Lowest in Month, corrected for Index errors, on the th, = ?

Difference, or Monthly Range, = ?

Mean of all the Highest, = 55.5

Mean of all the Lowest, M.O. — 43.1

Difference, or Mean Daily Range, = 12.4

Mean Temperature of Month, $\frac{1}{2}$ (Mean Max. + Mean Min.), = 49.3

S-R. THERMOMETER, Min. on Grass, Lowest in Month, =

" " Mean, =

Black Bulb, Max. in Sun, Highest in Month, =

HYCROMETER, Dry Bulb, Mean of A.M. and P.M. Readings, =
Wet Bulb, Mean of A.M. and P.M. Readings, =
Computed Temperature of Dew-Point, =
Do. Elastic Force of Vapour, =
Do. Relative Humidity (Saturation = 100), =
RAIN fell on : 16 Days; Amount in Inches, = 2.45

WIND.		SUMMARY.							Calm or Variable.	Mean Force 0-12.
Direction.	N	NE	E	SE	S	SW	W	NW		
A.M.	6	6	2	1	1	5	5	5		
P.M.										
Sum.	12	12	4	2	2	10	10	10	—	

= 62

Observations made and
Return verified by { _____

(Signed) Peter Harper

N.B.—**Rain** to be measured at 9 A.M. and the amount entered to the previous day.
See instructions on back of Schedule.

INSTRUCTIONS

In order to insure uniformity in the observations made at the Observing Stations of the Scottish Meteorological Society, the Council request the Observers to adopt the methods described below.

HOURS OF OBSERVATION.

The Council recommend that Observations be made precisely at 9 A.M. and 9 P.M. (Greenwich Time). At both hours the Barometer and Dry and Wet Bulb Thermometers should be read, and notes made of the Wind, Cloud, and general weather. The Rain Gauge should be read at 9 A.M. only, and the Maximum and Minimum Self-registering Thermometers at 9 P.M. only.

It is hoped that every effort will be made to insure punctuality. When, however, an observation is taken not at the usual hours, it is requested that this be stated in a note on the Schedule.

All instruments used should be compared with a certified standard; Observers are requested to communicate with the Secretary before purchasing new or repairing old instruments.

BAROMETER.

The Barometer should be hung in a good light and in a room not exposed to sudden changes of temperature. The upper part of the scale must not be higher than the level of the observer's eye, and the instrument must hang vertically.

Barometers should not be moved from their places except by persons accustomed to the work, as they are very liable to get air into the mercury column when improperly handled. Mercorial barometers mounted in metal cases are the only sort suitable for the accurate measurement of atmospheric pressure.

PORTIN BAROMETER. — In setting this instrument the level of the mercury in the glass cistern has first to be adjusted by turning the screw below the cistern till the surface of the mercury just touches the ivory point which projects downwards from the cover of the cistern. A modification of the Fortin pattern is used at several of the Society's Stations, in which the adjustment is made by turning the screw until the zero line on an ivory rod which projects through the cover of the cistern is brought to coincide with the lines on the uprights beside it. In either pattern this cistern adjustment must be made before the Vernier at the top of the mercury column is set.

In the BOARD or TRADE pattern of barometer no adjustment of the cistern is required, and the Observer can at once proceed to set the Vernier, which in all three classes of instrument is done as follows:—

First see that the Vernier is raised above the mercury, then lower it till its front and back edge both just touch, that is, form a tangent to the highest part of the mercury column. The top of the mercury is usually slightly convex, and care must be taken not to bring the Vernier down to where the front of the mercury touches the glass, which is below the real top of the column.

The attached thermometer should be read and noted before setting the barometer, as its readings may be affected by heat from the Observer's body while handling the instrument.

The errors most frequently made in reading the barometer are mistakes of 1.000 inch, 0.100 inch, and 0.050 inch; that is to say, instead of 29.365 one of the following is sometimes set down—viz. 30.365, 29.265, or 29.315. Experience having shown that even the best Observers occasionally make these mistakes, the reading, after it is written down, should be compared again with the scale.

DATES IN CONNECTION WITH THE PERIODICAL RETURN OF THE SEASONS.

FOREST TREES.	In Flower.	Leaf buds first Appear.	In Leaf.	Divested of Leaves.	CROPS, mentioning variety.	Sowing or Planting.	Appearing above Ground.	In Ear or Flower.	First Out or Harvested.
Alder,					Barley,				
Ash,					Bare or Bigg,				
Beech,					Oats,				
Birch,					Wheat,				
Elm,					Beans,				
Larch,					Pease,				
Lime,					Potatoes,				
Oak,					Turnips,				
Sycamore or Plane,					Rye Grass,				

SHRUBS, ETC.	First in Blossom.	FRUITS.	First in Blossom generally.	MIGRATORY BIRDS.	First Arrival.	Departure.
Barberry,		Apple,		Cuckoo,		
Bouree or Elder,		Black Currant,		Curlew,		
Broom,		Cherry,		House-Swallow,		
Hazel,		Gean,		Lapwing,		
Hawthorn,		Gooseberry,		Plover,		
Holly,		Peach,		Sad-Martin,		
Laburnum,		Pear,		Starling,		
Lilac,		Plum,		Swan,		
Mezeron,		Strawberry,		Rail or Corn Crane,		
Mountain Ash or Rowan,						
Red Flowering Currant,						
Rhododendron Ponticum,						
Whin,						

The Society will be glad to receive any portions of the information indicated in this table that may come under the Observer's notice.

FOR TAKING METEOROLOGICAL OBSERVATIONS.

RAIN GAUGE.

The Rain Gauge should be read at 9 A.M. each day, and the amount entered to the previous day on the Schedule: thus the quantity-measured at 9 A.M. on the 5th should be put down on the line containing the observations of the 4th of the month, since out of the twenty-four hours ending at 9 A.M. on 5th, fifteen belong to the 4th and only nine to the 5th, so that the amount may more properly be credited to the former day. The monthly total for, say, January is thus what falls between 9 A.M. on 1st January and 9 A.M. on 1st February.

The measuring glass is divided to hundredths of an inch—the highest line indicating .50, that is fifty hundredths or half an inch. The amount should be entered on the Schedule thus: if up to say the sixth line in the glass as .06, if up to the twenty-third line as .23, if up to the thirtieth line as .30, and so on, there being always two figures put down to the right of the decimal point. Care should be taken to avoid entering .08 as simply 8, or .30 as .3, as this may cause confusion when adding the figures to get the total for the month.

When the fall exceeds one fill of the measuring glass it is necessary to measure it in portions, and each successive reading should be jotted down on the flyleaf of the notebook or other convenient place before the glass is emptied. Thus after heavy rain the amounts measured might be:—

.47
—42
—38
1.27

The total, 1.27, would be entered on the Schedule.

The glass must be held vertically or placed on a level surface when reading. A little uncertainty is sometimes caused by the upward curvature of the water, where it touches the side of the glass, but the true reading is half way between the two apparent edges of the water surface. When there is nothing in the gauge a stroke (—) should be entered on the Schedule rather than the figure 0.

Snow or Hail is counted as Rainfall, and should be melted and measured as such. The upper part of the gauge may be taken indoors, and what is lying in it thawed. To save time, especially if snow or rain be then falling, it is convenient to add a measured quantity of warm water to the snow in the gauge, this quantity being afterwards deducted from the total to get the amount that has fallen. The depth of snow lying on the ground should be noted in the Remarks column.

In gauges, such as Flenings, in which a float and measuring rod is used, the rod should be removed or tied down below the level of the rim, except when a measurement is being taken, because if allowed to project above the gauge, it would prevent it catching the true amount of fall.

If a gauge is only read once a month this should be done on the morning of the 1st, and the amount entered to the previous month.

The Rain Gauge should be placed in an open situation, if possible with no elevated objects close to it, in any case trees, walls, etc., should never be nearer to the gauge in horizontal distance than their own height. The gauge should be firmly fixed with its rim 12 inches above ground; if surrounded by grass, care must be taken that it is never allowed to grow as high as the rim. The gauges at most Stations are five inches in diameter, though a few of larger or smaller size are also in use. A convenient way of fixing a gauge in position is to drive four stout wooden pegs from 12 to 18 inches long into the ground, one at each side of the gauge.

WIND, CLOUD, SUNSHINE, ETC.

WIND.

The direction and force of the Wind should be noted at 9 A.M. and 9 P.M. In confined situations where the true direction cannot be easily observed, it is best to ascertain this by watching the movement of smoke from chimneys, or even of the lower clouds. The force of the wind should be noted according to the scale given on the other side of the Schedule.

At Stations where an Anemometer is in use, the readings at 9 A.M. each day should be put down in the column provided, the values being entered to the previous day, as in the case of the Rainfall.

CLOUDS.

The amount of Cloud should be estimated on the scale, 0 to 10, 0 indicating a clear and 10 an overcast sky. Only the part of the sky over 30° above the horizon should be taken into account, as it is impossible to estimate the space covered by Clouds nearer the horizon. A convenient table for noting briefly the species of Cloud will be found on the other side of the Schedule. It is desirable to note, if possible, the direction from which the Clouds are moving. If there is more than one layer of clouds on the sky, they should be noted.

Thus, for example, Cir. W. 4 would indicate that four-tenths of the sky was covered with cirrus moving from the West, and two-tenths with cumulus moving from the S. W.

SUNSHINE.

This column is primarily for those Stations where a Sunshine Recorder is kept; at other Stations, however, the Observer may note in it the number of hours each day that the sun shines with sufficient clearness to cast a distinct shadow.

RADIATION THERMOMETERS.

A MAXIMUM THERMOMETER, with its bulb blackened and enclosed in an outer glass bulb exhausted of air, is used at many stations to register the highest temperature in the sun. It should be mounted horizontally about four feet above ground with its bulb pointing south, and should be read and set at 9 P.M.

A MINIMUM THERMOMETER on grass is used to register the lowest radiation temperature at night. It should be placed on wooden supports a few inches above the surface of the grass. It may be read and set at 9 P.M., but in warm weather, as the spirit in this instrument is liable to evaporate when exposed to bright sunshine and to condense again in the upper part of the tube, it is better to read it at 9 A.M., to put it inside the screen during the day, and to set and replace it at 9 P.M.

THERMOMETERS UNDER GROUND.

These should be read at 9 A.M., and the readings entered on the day on which they are made.

REMARKS.

In the Remarks column should be noted all occurrences of Snow, Hail, or Heavy Rain; of Thunder or Lightning, or both together; of all Auroras, Meteors, or Halos round the sun or moon; of Fogs, Gales or Storms, and generally of all noteworthy Weather phenomena.

The table and additional lines on the back of the Schedule are for the use of those Observers who wish to record Notes connected with the changes of the Seasons, such as the growth of Crops, Fruit, etc., and the migrations of Birds; also the prevalence of Diseases in man, in the lower animals, and in plants. Such observations are often of great interest and utility when taken in conjunction with the ordinary Meteorological records.

ADDITIONAL REMARKS.

THE SECRETARY,

Scottish Meteorological Society,

122 George Street,

EDINBURGH.

BOOK POST.



SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Duthie Park, County of Aberdeen, During the MONTH of June 1910.Lat. _____, Long. _____, Distance from Sea 2 miles. Height of Cistern of the Barometer above Mean Sea-Level 50 feet, above Ground 4 feet.Diameter of Rain Gauge 5 inches. Height of Rim of Gauge above Ground 12 inches

The Hours of Observation are of Greenwich Time.

Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER.				RAIN.	WIND.				CLOUDS.				SUNSHINE. Hours.	THERMOMETERS under Ground.					GENERAL REMARKS. Occurrence of Snow, Hail, Thunder, Lightning, Fog, Gales, Meteors, Auroras, Remarkable Depression or Elevation of Barometer, etc. Mention the hour at which Storms, including Thunder and Lightning, began and ended.	Days of Month.					
	9 A.M.		9 P.M.		Protected in Screen, 4 feet above Ground.		Black Bulb Max. in Sun.		Min. on Grass.		9 A.M.			9 P.M.		9 A.M.		9 P.M.		9 A.M.														
	Barometer.	Attached Thermometer.	Barometer.	Attached Thermometer.	Max.	Min.	Max.	Min.	Max.	Min.	Dry bulb.	Wet bulb.		Dry bulb.	Wet bulb.	Direction.	Force, Scale of 0-12.	Direction.	Force, Scale of 0-12.	Ane- mometer. 9 A.M.	Species and Direction.		Amount (0-10).	Species and Direction.	Amount (0-10).	No. 3 ins.	No. 12 ins.			No. 22 ins.	No. 36 ins.	No. 48 ins.		
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.		No.	No.	No.	No.	No.	No.	No.	No.		No.	No.	No.	No.	No.			No.	No.	No.	No.	
1	29.500	58.			61.40						55.54				0.00	2					8 ci										fair & very fine	1		
2	29.500	59			61.40						59.59				0.04	3					6 ci										Shower then fair & fine	2		
3	29.525	60			61.0	45.0					59	59			0.00	SW 2					6 ci										fair & fine very mild Am	3		
4	29.800	56			63.0	47.0									0.00	NE 2					8 ci										Do Do	4		
5	30.100	58			63.0	42.0									0.00	NE 6					8 ci										fair & very fine	5		
6	30.255	68			60.0	42.0									0.00	NE 6					4 ci										Do Do	6		
7	30.450	71			60.0	47.2						38			0.00	SE 2					0										fair & very fine	7		
8	30.300	72			61.0	43.2						58			0.01	SE 2					4 ci										fair & fine	8		
9	30.025	71			63.2	44.0						64			0.00	E 2					4 ci										Do Do	9		
10	29.855	63			71.0	49.0						66			0.00	S 2					0										Do Do	10		
11	29.840	69			64.0	54.0						65			0.00	SW 2					5 ci										Do Do	11		
12	29.875	61			73.2	50.0						69			0.00	SE 2					5 ci										Do Do	12		
13	30.000	60			57.0	53.0						56			0.00	SE 2					10 n										fine mild rain	13		
14	30.080	60			59.0	49.0						53			0.00	NE 4					10 n										dull	14		
15	30.360	61			60.0	49.0						56			0.00	S 2					5 ci										dull fair mild	15		
16	30.350	62			62.0	50.0									0.00	SE 2					6 ci										Do Do	16		
17	30.300	62			61.0	51.0									0.00	SE 2					6 ci										Do Do	17		
18	30.360	62			53.0	48.0						34			0.00	SE 2					6 ci										Do Do	18		
19	30.245	62			66.0	48.0						43			0.00	SE 2					8 ci										Do Do	19		
20	30.000	65			60.0	50.0						43			0.00	SE 2					6 ci										fair & fine mild	20		
21	29.800	62			66.0	53.0						46			0.01	SE 2					8 ci										Do Do	21		
22	29.700	58			66.0	52.0						52			0.00	SE 2					10 n										Do Do	22		
23	29.650	63			61.1	47.0						54			0.20	SE 6					0 0 0										dull fair & fine	23		
24	29.600	60			60.0	52.0						55			0.02	SE 2					0 0 2										dull fair & fine	24		
25	29.500	58			56.0	45.0						56			0.00	NE 2					10 n										dull fair & fine	25		
26	29.415	60			36.0	46.0						57			10 0	W 4					5 ci										dull fair & fine slight rain	26		
27	29.370	51			59.8	44.0						52			0.00	W 2					5 ci										dull fair & fine	27		
28	29.400	50			60.0	46.2						56			0.00	S 2					6 ci										Do Do	28		
29	29.420	60			60.0	46.5						55			0.00	SE 2					6 ci										dull fair mild	29		
30																																fair & very fine	30	
31																																		31
Sums.	1283	8			71	131									0.27						177													
Means.	26745	0.9			18.3	25.3									0.47						59													
Corrections for Instrumental Errors.																																		
Corrections for Diurnal Range.																																		
Corrected Means																																		

NOTATION USED IN GENERAL REMARKS.
a. denotes aurora.
d. drizzling rain.
f. fog.
fr. frost.
h. hoar-frost.
h. fr. haze.
h. hail.
l. lightning.
lu. co. lunar corona.
lu. ha. lunar halo.
m. mist.
p. passing showers.
r. rain.
r. 2 heavy rain.
sl. sleet.
sn. snow.
so. ha. solar halo.
q. 1 squall.
q. 2 violent squalls.
t. thunder.
t. s. thunder-storm.
CLOUDS.
High Clouds.
Cirrus, cir.
Cirro-stratus, cir.-str.
Cirro-cumulus, cir.-cum.
Middle Clouds.
Strato-cirrus, str.-cir.
Cumulo-cirrus, cum.-cir.
Lower Clouds.
Strato-cumulus, str.-cum.
Cumulus, cum.
Cumulo-nimbus, cum.-nim.
Nimbus, nim.
Stratus, str.

BEAUFORT SCALE FOR ESTIMATING FORCE OF WIND—(0-12).
FORCE. 0 Calm. 1 Light Air. 2 Light Breeze. 3 Gentle Breeze. 4 Moderate Breeze. 5 Fresh Breeze. 6 Strong Breeze. 7 Moderate Gale. 8 Fresh Gale. 9 Strong Gale. 10 Whole Gale. 11 Storm. 12 Hurricane.

BAROMETER. Corrected Mean at 9 A.M., minus Correction for Temp. = 29.837
Corrected Mean at 9 P.M., minus Correction for Temp. = 29.855
Mean at Station, corrected, and at 32° = 29.855
Correction for height, feet above Mean Sea-level, 0.048
Mean, reduced to 32°, and Sea-level, 29.855
Highest Reading, corrected for Index error, on the th, = 30.100
Lowest Do. Do. on the th, = 29.370
Difference, or Monthly Range, = 0.730

S.-R. THERMOMETER, (in shade) Highest in Month, corrected for Index Errors, on the 12 th, = 73
Lowest in Month, corrected for Index errors, on the 1 th, = 44
Difference, or Monthly Range, = 32
Mean of all the Highest, = 60.6
Mean of all the Lowest, = 48.5
Difference, or Mean Daily Range, = 12.1
Mean Temperature of Month, $\frac{1}{2}$ (Mean Max. + Mean Min.), = 54.6
S.-R. THERMOMETER, Min. on Grass, Lowest in Month, = 34
" " Mean, = 55
Black Bulb, Max. in Sun, Highest in Month, = 71

HYGROMETER, Dry Bulb, Mean of A.M. and P.M. Readings, = 55
Wet Bulb, Mean of A.M. and P.M. Readings, = 55
Computed Temperature of Dew-Point, = 55
Do. Elastic Force of Vapour, = 0.47
Do. Relative Humidity (Saturation = 100), = 100
RAIN fell on 8 Days; Amount in Inches, = 0.47

WIND.		SUMMARY.									
Direction.		N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force 0-12.
A.M.			7	1	11	5	1	3	2		
P.M.											
Sum.		0	14	2	22	10	2	6	4	0	2.3

Observations made and
Return verified by

(Signed)

N.B.—Rain to be measured at 9 A.M. and the amount entered to the previous day.
See instructions on back of Schedule.

INSTRUCTIONS

FOR TAKING METEOROLOGICAL

OBSERVATIONS.

IN order to insure uniformity in the observations made at the Observing Stations of the Scottish Meteorological Society, the Council request the Observers to adopt the methods described below.

HOURS OF OBSERVATION.

The Council recommend that Observations be made precisely at 9 A.M. and 9 P.M. (Greenwich Time). At both hours the Barometer and Dry and Wet Bulb Thermometers should be read, and notes made of the Wind, Cloud, and general weather. The Rain Gauge should be read at 9 A.M. only, and the Maximum and Minimum Self-registering Thermometers at 9 P.M. only.

It is hoped that every effort will be made to insure punctuality. When, however, an observation is taken not at the usual hours, it is requested that this be stated in a note on the Schedule.

All instruments used should be compared with a certified standard; Observers are requested to communicate with the Secretary before purchasing new or repairing old instruments.

BAROMETER.

The Barometer should be hung in a good light and in a room not exposed to sudden changes of temperature. The upper part of the scale must not be higher than the level of the observer's eye, and the instrument must hang vertically. Barometers should not be moved from their places except by persons accustomed to the work, as they are very liable to get air into the mercury column when improperly handled. Mercurial barometers mounted in metal cases are the only sort suitable for the accurate measurement of atmospheric pressure.

FORTIN BAROMETER.—In setting this instrument the level of the mercury in the glass cistern has first to be adjusted by turning the screw below the cistern till the surface of the mercury just touches the ivory point which projects downwards from the cover of the cistern. A modification of the Fortin pattern is used at several of the Society's Stations, in which the adjustment is made by turning the screw until the zero line on an ivory rod which projects through the cover of the cistern is brought to coincide with the lines on the uprights beside it. In either pattern, this cistern adjustment must be made before the Vernier at the top of the mercury column is set.

In the BOARD OF TRADE pattern of barometer no adjustment of the cistern is required, and the Observer can at once proceed to set the Vernier, which in all three classes of instrument is done as follows:—

First see that the Vernier is raised above the mercury, then lower it till its front and back edge both just touch, that is, form a tangent to, the highest part of the mercury column. The top of the mercury is usually slightly convex, and care must be taken not to bring the Vernier down to where the front of the mercury touches the glass, which is below the real top of the column.

The attached thermometer should be read and noted before setting the barometer, as its readings may be affected by heat from the Observer's body while handling the instrument.

The errors most frequently made in reading the barometer are mistakes of 1·000 inch, 0·100 inch, and 0·050 inch; that is to say, instead of 29·365 one of the following is sometimes set down—viz. 30·365, 29·265, or 29·315. Experience having shown that even the best Observers occasionally make these mistakes, the reading, after it is written down, should be compared again with the scale.

DATES IN CONNECTION WITH THE PERIODICAL RETURN OF THE SEASONS.

FOREST TREES.	In Flower.	Leaf buds first Appear.	In Leaf.	Diseste of Leaves.	CROPS, mentioning variety.	Sowing or Planting.	Appearing above Ground.	In Ear or Flower.	First Cut or Raised.
Alder,					Barley,				
Ash,					Bere or Bigg's Oats,				
Beech,					Wheat,				
Birch,					Beans,				
Elm,					Pease,				
Larch,					Potatoes,				
Lime,					Turnips,				
Oak,					Rye Grass,				
Sycamore or Plane,									

SERVICES, ETC.	First in Blossom.	FRUITS.	First in Blossom.	Fruit ripe, generally.	MIGRATORY BIRDS.	First Arrival.	Departure.
Barberry,		Apple,			Cuckoo,		
Bourtree or Elder,		Black Currant,			Curlew,		
Broom,		Cherry,			House-Swallow,		
Hazel,		Goan,			Lapwing,		
Hawthorn,		Gooseberry,			Plover,		
Holly,		Peach,			Saud-Martin,		
Laburnum,		Pear,			Starling,		
Lilac,		Plum,			Swan,		
Mezereum,		Strawberry,			Rail or Corn Crane,		
Mountain Ash or Rowan,							
Red Flowering Currant,							
Rhododendron Ponticum,							
Whin,							

The Society will be glad to receive any portions of the information indicated in this table that may come under the Observer's notice.

RAIN GAUGE.

The Rain Gauge should be read at 9 A.M. each day, and the amount entered to the *previous day on the Schedule*: thus the quantity measured at 9 A.M. on the 5th should be put down on the line containing the observations of the 4th of the month, since out of the twenty-four hours ending at 9 A.M. on 5th fifteen belong to the 4th and only nine to the 5th, so that the amount may more properly be credited to the former day. The monthly total for, say, January is thus what falls between 9 A.M. on 1st January and 9 A.M. on 1st February.

The measuring glass is divided to hundredths of an inch—the highest line indicating ·50, that is fifty hundredths or half an inch. The amount should be entered on the Schedule thus: if up to say the sixth line in the glass as ·06, if up to the twenty-third line as ·23, if up to the thirtieth line as ·30, and so on, there being always two figures put down to the right of the decimal point. Care should be taken to avoid entering ·08 as simply 8, or ·30 as ·3, as this may cause confusion when adding the figures to get the total for the month.

When the fall exceeds one fill of the measuring glass it is necessary to measure it in portions, and each successive reading should be jotted down on the flyleaf of the notebook or other convenient place before the glass is emptied. Thus after heavy rain the amounts measured might be:—

·47
·42
·38
1·27

The total, 1·27, would be entered on the Schedule.

The glass must be held vertically or placed on a level surface when reading. A little uncertainty is sometimes caused by the upward curvature of the water where it touches the side of the glass, but the true reading is half way between the two apparent edges of the water surface. When there is nothing in the gauge a stroke (—) should be entered on the Schedule rather than the figure 0.

Snow or Hail is counted as Rainfall, and should be melted and measured as such. The upper part of the gauge may be taken indoors, and what is lying in it thawed. To save time, especially if snow or rain be then falling, it is convenient to add a measured quantity of warm water to the snow in the gauge, this quantity being afterwards deducted from the total to get the amount that has fallen. The depth of snow lying on the ground should be noted in the Remarks column.

In gauges, such as *Floppers*, in which a float and measuring rod is used, the rod should be removed or tied down below the level of the rim, except when a measurement is being taken, because if allowed to project above the gauge, it would prevent it catching the true amount of fall.

If a gauge is only read once a month this should be done on the morning of the 1st, and the amount entered to the previous month.

The Rain Gauge should be placed in an open situation, if possible with no elevated objects close to it, in any case trees, walls, etc., should never be nearer to the gauge in horizontal distance than their own height. The gauge should be firmly fixed with its rim 12 inches above ground; if surrounded by grass, care must be taken that it is never allowed to grow as high as the rim. The gauges at most Stations are five inches in diameter, though a few of larger or smaller size are also in use. A convenient way of fixing a gauge in position is to drive four stout wooden pegs from 12 to 18 inches long into the ground, one at each side of the gauge.

ADDITIONAL REMARKS.

WIND, CLOUD, SUNSHINE, ETC.

WIND.

The direction and force of the Wind should be noted at 9 A.M. and 9 P.M. In confined situations where the true direction cannot be easily observed, it is best to ascertain this by watching the movement of smoke from chimneys, or even of the lower clouds. The force of the wind should be noted according to the scale given on the other side of the Schedule.

At Stations where an Anemometer is in use, the readings at 9 A.M. each day should be put down in the column provided, the values being entered to the previous day, as in the case of the Rainfall.

CLOUDS.

The amount of Cloud should be estimated on the scale, 0 to 10, 0 indicating a clear and 10 an overcast sky. Only the part of the sky over 30° above the horizon should be taken into account, as it is impossible to estimate the space covered by Clouds nearer the horizon. A convenient table for noting briefly the species of Cloud will be found on the other side of the Schedule. It is desirable to note, if possible, the direction from which the Clouds are moving. If there is more than one layer of clouds on the sky, they should be noted.

Thus, for example, Cir. W. 4 would indicate Cum. Str. S.W. 2 that four-tenths of the sky was covered with cirrus moving from the West, and two-tenths with cumulus moving from the S.W.

SUNSHINE.

This column is primarily for those Stations where a Sunshine Recorder is kept; at other Stations, however, the Observer may note in it the number of hours each day that the sun shines with sufficient clearness to cast a distinct shadow.

RADIATION THERMOMETERS.

A MAXIMUM THERMOMETER, with its bulb blackened and enclosed in an outer glass bulb exhausted of air, is used at many stations to register the highest temperature in the sun. It should be mounted horizontally about four feet above ground with its bulb pointing south, and should be read and set at 9 P.M.

A MINIMUM THERMOMETER on grass is used to register the lowest radiation temperature at night. It should be placed on wooden supports a few inches above the surface of the grass. It may be read and set at 9 P.M., but in warm weather, as the spirit in this instrument is liable to evaporate when exposed to bright sunshine and to condense again in the upper part of the tube, it is better to read it at 9 A.M., to put it inside the screen during the day, and to set and replace it at 9 P.M.

THERMOMETERS UNDER GROUND.

These should be read at 9 A.M., and the readings entered on the day on which they are made.

REMARKS.

In the Remarks column should be noted all occurrences of Snow, Hail, or Heavy Rain; of Thunder, or Lightning, or both together; of all Auroras, Meteors, or Halos round the sun or moon; of Fogs, Gales or Storms, and generally of all noteworthy Weather phenomena.

The table and additional lines on the back of the Schedule are for the use of those Observers who wish to record Notes connected with the changes of the Seasons, such as the growth of Crops, Fruit, etc., and the migrations of Birds; also the prevalence of Diseases in man, in the lower animals, and in plants. Such observations are often of great interest and utility when taken in conjunction with the ordinary Meteorological records.

THE SECRETARY,

Scottish Meteorological Society,

122 George Street,

EDINBURGH.



SCOTTISH METEOROLOGICAL SOCIETY.

OBSERVATIONS taken at Duthie Park, County of Aberdeen, During the MONTH of July 1911.

Lat. _____ Long. _____ Height of Cistern of the Barometer above Mean Sea Level 44 feet, above Ground 4 feet. Diameter of Rain Gauge 5 ins.
Height of Gauge above Mean Sea Level 44 feet. Height of Rim of Gauge above Ground 12 ins.

Date.	BAROMETER.				* SELF-REGISTERING THERMOMETERS.				HYGROMETER.				+ RAIN.	WIND.				CLOUDS.				SUNSHINE.	THERMOMETERS under Ground.			WEATHER.		GENERAL REMARKS. Occurrence of Snow, Hail, Thunder, Lightning, Fog, Gales, Meteors, Auroras, Remarkable Depression or Elevation of Barometer, etc. Mention the hour at which Storms, including Thunder and Lightning, began and ended.	Date.			
	9 A.M.		9 P.M.		Screen.		Max. 9 P.M.	Min. 9 P.M.	9 A.M.	9 A.M.		9 P.M.		Amount at 9 A.M.	9 A.M.		9 P.M.		Ane. meter.	9 A.M.			9 P.M.		9 A.M.					At 9 A.M.	At 9 P.M.	
	Barometer.	Attached Thermometer.	Barometer.	Attached Thermometer.	Dry bulb.	Wet bulb.				Dry bulb.	Wet bulb.	Direction.			Force, Scale of 0-12.	Direction.	Force, Scale of 0-12.	Species and Direction.		Amount (0-10).	Species and Direction.		Amount (0-10).	3 ins.	12 ins.	48 ins.						
																											inches.					°
1	29.450	57	29.450	57	61.0	45.2	61	46	56.8	55.7		NW	2																	Fair light fleecy clouds	1	
2	29.450	57	29.450	57	61	47	61	47				N	2																			2
3	29.604		29.604		63	47	63	47				N	2																			3
4	29.709		29.709		64	48	64	51	56.1	58.3		NE	5					0.00														4
5	29.986		29.986		30	03.5	58	49	52.4	57.4		NW	1					0.60														5
6	30.845		30.845		29	92.4	61	51	57.8	57.1		SE	2					0.50														6
7	29.783		29.783		29	82.5	60	46	52.0	50.4		NE	4					0.00														7
8	29.785		29.785		29	88.5	56	49	52.0	50.4		NW	5					0.00														8
9	30.159		30.159		30	19.1	58	48	50.2	52.2		NW	4					0.00														9
10	30.140		30.140		68	50	68	49	55.4	55.0		NE	5					8	ci													10
11	30.100	57	30.100	57	68	50.4	63	50	56.0	57.0		NE	3					6	c													11
12	30.185	56	30.185	56	63	46.5	63	48	58.0	57.0		S	2					8	ci													12
13	30.230	63	30.230	63	63	47	63	45	65.0	60.4		SE	2					0														13
14	30.175	60	30.175	60	64	46	63	46	57.0	60.0		SE						4	ci													14
15	30.150	52	30.150	52	57	05.0	57	51	55.0	54.0		SE						10	n													15
16	30.200	53	30.200	53	57	00.0	58	50	04.5	45.4		SE	4					6	ci													16
17	30.050	58	30.050	58	58.2	49.4	58	49				SE	6					10	n													17
18	28.800	58	28.800	58	62	46.2	62	46	57.0	56.0		NE	4					5	ci													18
19	28.450	68	28.450	68	62	47	62	47	64.0	62.0		N	4					2	ci													19
20	28.000	60	28.000	60	63	51.0	62	51	65.0	63.0		NE	2					4	ci													20
21	28.400	60	28.400	60	62	51	67	51	62.0	58.2		NE	2					6	ci													21
22	29.725	61	29.725	61	62	51	62	51	60.5	58.4		S	4					6	ci													22
23	29.250	59	29.250	59	61	50	56	50	58.0	48.5		S	4					10	n													23
24	29.500	59	29.500	59	60	45.0	56	45				SW	2					5	ci													24
25	29.625	72	29.625	72	56	49.4	56	49	45.0	54.3		N	6					10	n													25
26	29.825	60	29.825	60	63	52	63	51				E	2					10	n													26
27	29.750	68	29.750	68	59	47	59	47	58.0	53.0		SE	2					10	n													27
28	29.500	48	29.500	48	62	52	60	52	46.1	57.0		S	4					6	ci													28
29	29.675	58	29.675	58	61	63	60	53	61.0	57.0		SE	2					4	ci													29
30	28.810	62	28.810	62	60	47	60	51	56.0	53.8		SE	4					5	ci													30
31	29.700	61	29.700	61	65	54.7	65	54	61.0	57.6		SW	5					6	ci													31
Sums.						12	25	280				2	48																			
Means.						60.8	49.9																									
Instrumental Errors.																																
Corrected Means.																																

WEATHER NOTATION.

a. denotes aurora.

b. " blue sky, cloudless.

bc. " blue sky with detached clouds.

c. " sky mainly cloudy, but with openings between the clouds.

d. " completely overcast.

e. " drizzling rain.

f. " wet air, without rain falling.

fe. " fog.

g. " wet fog.

h. " gloomy.

i. " hail.

l. " lightning.

lu. co. " lunar corona.

lu. ha. " lunar halo.

m. denotes mist.

n. " passing showers.

q. " squally.

r. " continuous rain.

s. " snow.

so. ha. " solar halo.

t. " thunder.

ts. " thunder-storm.

u. " fog, threatening appearance.

v. " unusual visibility of distant objects.

w. " dew.

x. " hoar frost.

z. " dust haze.

BEAUFORT SCALE FOR ESTIMATING FORCE OF WIND—(0-12).

FORCE.

0 Calm.

1 Light Air.

2 Slight Breeze.

3 Gentle Breeze.

4 Moderate Breeze.

5 Fresh Breeze.

6 Strong Breeze.

7 High Wind.

8 Gale.

9 Strong Gale.

10 Whole Gale.

11 Storm.

12 Hurricane.

WEATHER NOTATION.

a. denotes aurora.	m. denotes mist.
b. blue sky, cloudless.	p. passing showers.
bc. blue sky with detached clouds.	q. squally.
c. sky mainly cloudy, but with openings between the clouds.	r. continuous rain.
d. completely overcast.	s. snow.
dc. drizzling rain.	so. ha. solar halo.
e. wet air, without rain falling.	t. s. thunder.
f. fog.	ts. thunder-storm.
fe. wet fog.	u. ugly, threatening appearance.
g. gloomy.	v. unusual visibility of distant objects.
h. hail.	w. dew.
l. lightning.	x. hoar frost.
lu. co. lunar corona.	z. dust haze.
lu. ha. lunar halo.	

BEAUFORT SCALE FOR ESTIMATING FORCE OF WIND—(0-12).		
FORCE.	FORCE.	FORCE.
0 Calm.	5 Fresh Breeze.	9 Strong Gale.
1 Light Air.	6 Strong Breeze.	10 Whole Gale.
2 Slight Breeze.	7 High Wind.	11 Storm.
3 Gentle Breeze.	8 Gale.	12 Hurricane.
4 Moderate Breeze.		

BAROMETER.

Corrected Mean at 9 A.M., minus Correction for Temp. _____
Corrected Mean at 9 P.M., minus Correction for Temp. _____
Mean at Station, corrected, and at 32°, 29.791
Correction for height, feet above Mean Sea Level, + 49
Mean, reduced to 32°, and Sea Level, 29.840
Highest Reading, corrected for Index error, on _____
Lowest Do. Do., on _____
Difference, or Monthly Range, _____

SELF-REGISTERING THERMOMETERS.

Highest in Month, on 10 th, 65.
Lowest in Month, on 24 th, 45.
Difference, or Monthly Range, 20.
Mean of all the Highest, 60.8
Mean of all the Lowest, 49.0
Difference, or Mean Daily Range, 11.8
Mean Temperature of Month, $\frac{1}{2}$ (Mean Max. + Mean Min.), 54.9
Min. on Grass, Lowest in Month, _____
" " Mean, _____
Black Bulb, Max. in Sun, Highest in Month, _____

ADDITIONAL REMARKS.

HYGROMETER.

Dry Bulb, Mean of A.M. and P.M. Readings, _____
Wet Bulb, Mean of A.M. and P.M. Readings, _____
Computed Temperature of Dew-Point, _____
Do. Elastic Force of Vapour, _____
Do. Relative Humidity (Saturation = 100), _____
RAIN fell on 11 Days; Amount in Inches, 2.48

WIND.		SUMMARY.									
Direction.		N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force 0-12.
A.M.		5	6	0	9	4	2	0	4		
P.M.											
Sun.		10	12	2	18	8	4	0	8	0	

* If Observations are taken at 9 A.M. only, the reading of the Maximum thermometer must be entered to the previous day.

† Rain to be measured at 9 A.M. and the amount entered to the previous day.

WEATHER SUMMARY.

Number of Days of Precipitation, _____
Snow, _____
Hail, _____
Thunder, _____
Clear Sky, _____
Overcast, _____
Fog, _____
Ground Frost, _____
Gale, _____

INSTRUMENTS IN USE.

Barometer, No. _____
Dry Bulb, No. _____
Wet Bulb, No. _____
Maximum, No. _____
Minimum, No. _____
Solar Radiation, No. _____
Grass Min., No. _____
Sun Recorder, No. _____
1-foot Therm., No. _____
4-foot Therm., No. _____

Observations made and Return verified by Peter H. H. H.

(Signed)



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EDINBURGH

BOOK POST

